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HYPOSPADIAS FEIGNING HERMAPHRODITISM.

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THE person here described came to this country from England in July, 1877, and a few weeks after landing in Boston found his way, as an inmate, to the State Almshouse of Massachusetts at Tewksbury. He entered the institution in a woman's dress, and gave the name of Sarah Jane B. His age was thirty-two, height five feet four and a half inches, and weight one hundred and eighty and a half pounds. His employment was given as "weaver in a mill."

Suspicion was at once directed to the sex by the voice and general appearance. He also, almost immediately, requested that facilities for shaving the beard might be provided. He was perfectly willing that the genitals should be examined by the proper authorities.

The physical development was that of a man. The voice was evidently masculine, the beard abundant, and the breasts flat. The general appearance of the private parts was also masculine. It was readily noticed, however, that the testicles hung in separate bags, — two scrotums. These being drawn aside revealed the following features: A short penis, of which the prepuce was immediately continuous with the skin of the scrotum. The prepuce could never be pulled forward so as to cover the glans and remain in that position. The anterior wall of the urethra was deficient, and hence the orifice of the urethra was at some distance (eight centimetres) from the end of the penis. Immediately below the orifice of the urethra (one centimetre), and four centimetres distant from the orifice of the rectum, was another opening, which is denominated a spurious vagina. This passage was large enough to admit a No. 12 catheter, and was six centimetres (two and a half inches) in length. When the catheter was introduced into



this passage it could be readily felt by a finger in the rectum. Water forcibly injected into this passage always returned the same way. The patient stated that no urine had ever passed through it, and no trouble



U indicates orifice of urethra.

V indicates orifice of spurious vagina.

had ever been experienced by its presence. No trace of any uterus could be detected. The testicles were large, one of them thirteen centimetres and the other fifteen centimetres in circumference. The anatomical construction appeared to be normal. All doubt with regard to the functional activity of the parts, however, as well as to the sex of the individual, was removed by the discovery of spermatozoa. He mentioned the fact that a secretion other than urine occasionally came away from the urethra, and on obtaining a specimen I found it to contain

the male germs. A specimen of these was exhibited by Dr. George H. Pillsbury to the Lowell Medical Journal Society, and the spermatozoa were pronounced by all the members present to be normal.

The general health of this person has always been good. His father died within the past year, and the mother eight years ago, but both of them were healthy most of their lives. He has had three brothers and three sisters, all healthy, and having no deformity. He knows of no family relative who has been deformed in this way. He states that when six years old the external genitals were examined by the family physician, and that the parents were advised to dress the child in girl's clothes. Subsequently other examinations were made with a similar result, but it would appear that all were made before puberty. Before this age, the testicles not having descended and the glans penis being smaller, the resemblance of the external genital organs to those of the female may have been very marked.

This case has been carefully examined by the physicians and surgeons of the Massachusetts General Hospital and many others. A cast of the parts has been taken in plaster of Paris by Dr. M. G. Parker, of Lowell, and placed in the museum of the Harvard Medical School.

"Sarah" alleged that his malformation prevented him from earning a livelihood in this country, while he could get along very comfortably in his native village, where he was well known. He was accordingly sent to England by the Board of State Charities.

With regard to the personal character of this individual my means of information were very limited. I was led to believe, however, that lasciviousness existed to a very marked degree, so much so indeed as to

suggest the inquiry whether ungratified lust may not have produced a certain mental obliquity.

It will not be out of place in this connection to call attention to the fact that very similar cases to this are described in the exhaustive treatise on Hermaphroditism contributed by Professor Simpson to the *Cyclopædia of Anatomy and Physiology*, and I doubt not that it will be of interest to reproduce here his "classification of hermaphroditic malformations."

Hermaphroditism.	Spurious.	In the female.	{ From excessive development of the clitoris, etc. From prolapsus of the uterus.
		In the male.	{ From extroversion of the urinary bladder. From adhesion of the penis to the scrotum. From hypospadiac fissure of the urethra, etc.
		Lateral.	{ Testis on the right and ovary on the left side. Testis on the left and ovary on the right side.
	True.	Transverse.	{ External sexual organs female, internal male. External sexual organs male, internal female.
		Vertical or double.	{ Ovaries and an imperfect uterus, with male vesiculae seminales and rudiments of vasa deferentia. Testicles, vasa deferentia, and vesiculae seminales, with an imperfect female uterus and its appendages. Ovaries and testicles coexisting on one or both sides, etc.

Unquestionably, then, this is a case of "spurious hermaphroditism in the male, from hypospadiac fissure of the urethra," and I think that I am justified also in regarding the blind passage between the urethra and rectum as a rudimentary vagina, indicating an arrest of development of the male *external* genitals and a commencement of the formation of those of the female.

A CASE OF VAGINAL LITHOTOMY.¹

BY ALFRED HOSMER, M. D. HARV., WATERTOWN.

THERE is nothing in the nature of the disease of the patient whose case is herewith presented which entitles my communication to the attention of this society. For calculus of the urinary bladder is not an affection peculiar to women; on the contrary, according to the figures given by Dr. Alfred McClintock, in an article to which reference may be made hereafter, there is on the part of the male sex a liability to be affected with stone, the relative excess of which may be represented by the ratio of eighteen to one. But my paper may claim a consideration at this time for the simple reason that the treatment of the affection in question by the operation of vaginal lithotomy is applicable only to the female.

The specimen² which I now exhibit was removed from an octogenarian in August last, and may be described as follows: In shape it is a flattened ellipsoid; in color, dirty white or gray. Its surface is coarsely

¹ Read at the meeting of the Obstetrical Society of Boston, December 9, 1876.

² No. 4821 in the Warren Museum.

crystalline, with varying degrees of roughness and some marked depressions. Its three diameters are, in inches, respectively, 1.9, 1.3, and 1.14; in millimetres, 48, 33, and 29.

Its weight immediately after removal was 520 grains, or 33.696 grammes. Five days later it weighed but 396.84 grains, or 25.715 grammes, losing in that period of time 123.16 grains, or 7.98 grammes, that is, 23.6 per cent. of its original weight.

Upon its external surface it is decidedly friable in its texture. Its appearance upon section presents a reddish-brown, compact nucleus, not small; a middle layer something more than an eighth of an inch in thickness, of a light yellowish-brown hue, with some mottling, and a dense, firm look; and an external layer showing the same color as the exterior of the stone, and with a certain open, loose structure which, under a low magnifying power, acquires a look that is well described by the word coralline. The report of Professor E. S. Wood is as follows:—

“The calculus which you sent me consists of three quite well-defined layers: the nucleus consists of uric acid and urates; the central layer contains chiefly the carbonate and phosphate of calcium; the outer layer consists chiefly of the urate of ammonium and carbonate of calcium, with a little phosphate and oxalate of calcium.”

Thus there is nothing very unusual in the composition of the stone, and in the nature of its nucleus it follows the rule of the majority of calculi.

Hoping to give a better interest to the subjoined clinical report, I have inverted the common order of statement, and given precedence to a description of that which was the essential fact in the case, although the last, chronologically, to become the subject of direct observation.

Mrs. —, a widow, aged eighty. Mother of five children. Now leading a quiet life without particular occupation, and with nothing of especial importance connected with her habits, excepting, perhaps, the inordinate use of condiments. She was born in Charlestown, and has never been long absent from the neighborhood of Boston. She took up her residence in an adjoining town in May, 1874. For several years she has been subject to diarrhoea, especially in the summer months, and during a much longer period an habitual irritability of the bladder, compelling frequent evacuation, has constantly attracted the attention of the female portion of the household. Rheumatic pain is also an old acquaintance. In earlier life she had several illnesses; “different forms of fever,” as she states the case. About three years since she began to suffer from prolapsus uteri, the displacement of the organ eventually attaining an extreme degree. This trouble continued for two years, with occasional rather profuse hæmorrhages during the first twelve

months. For a considerable time there has been much relief in respect of the uterine symptoms, but for two years pruritus of the vulva has been a constant source of excessive annoyance.

In her family history there is nothing that throws any light of explanation upon her present condition, which in its origin we can only trace back to the immeasurable region of the unknown, out of which are constantly emanating morbid processes so great in number and variety.

In the autumn of 1875 the old irritability of the bladder began to increase, and the organ became more intolerant than ever. The urination, in its greater frequency, was also attended and followed by pain, the severity and sharpness of which were steadily augmented. The urine, at first slightly changed to the eye, by degrees acquired the character soon to be described. The general condition, yielding to the depressing and exhausting influence of serious disease, soon became the seat of a slow process of deterioration. Matters had not advanced very far in this direction when aid and comfort were sought at the hands of medical women. Their attendance, failing to give any satisfaction, was not of long duration. What diagnostic idea determined the plan and purpose of their treatment I know not. Their methods caused extreme pain, and, what was worse, excited in the mind of the patient a state of apprehension and terror, and a dread of any instrumental interference that rendered it absolutely impossible to make a proper and thorough examination of the case when it first came under my observation, on June 12, 1876. I then found a woman, somewhat bent and a little below the medium stature; formerly stout, but now considerably emaciated: with a pale, cachectic look, and an expression of countenance significant of long suffering. In brief, she presented all the symptoms and discomforts of an intense chronic cystitis. The urine, horribly foetid, was converted into a semi-solid mass by the large proportion of mucus, pus, and blood which it contained. The bladder was the seat of constant pain, and the frequency of irresistible urination destroyed all chance of rest both by night and day. A violent pruritus, which affected the vulva and vagina, was the source of unceasing torment. The mental condition was one of marked depression.

The suggestion, made at once, that a calculus might be at the bottom of all the trouble was met by the declaration of the former attendants, who asserted most positively that there was no stone in the bladder. This statement produced a conviction the force of which was not at once to be impaired by any suspicions or opinions of mine; and the acquired timidity of the patient forced me for the time being to leave the question an open one. The indication for tonics and astringents was faithfully followed, but, for a very substantial reason, without benefit. Although the patient was at last frequently compelled to lie in the prone position in order to pass urine, yet the flow once com-

menced was never suddenly arrested. Incontinence was noticed in a very slight degree only, and that mostly when the call to pass urine came in bed; then the excretion sometimes escaped in small quantities before intended arrangements could be completed. There often ran from the vagina a copious, watery discharge, without urinous odor, and sometimes fresh blood, independent of any other evacuation.

I repeatedly urged the necessity of injecting and washing out the bladder as the only probable means of arresting the morbid process and giving a chance of recovery. More than once did the patient consent to have this done, only, through the failure of her courage at the critical moment, to postpone the operation until she should feel a little better. August 9th I managed to save her from another breach of promise. A double catheter was introduced just within the cavity of the bladder as gently and carefully as possible, and an injection made of a weak solution of carbolic acid. The result was some improvement in the quality of the urine and permission to repeat the use of the apparatus, which was done August 15th. I then, with the idea of thorough exploration, pushed the instrument as far as possible into the bladder and discovered the calculus, which was supposed to be a large one, because its contact with the beak of the catheter produced such a sense of solid resistance.

Vaginal lithotomy, to be done immediately, was advised, and the advice was accepted. But there were two unfortunate elements in the case: an extreme sensibility of the mucous membrane of the genito-urinary passages, most marked at the orifice of the urethra, which was swollen and red; and a state of mind which produced the greatest aversion to confinement in bed, and an obstinate reluctance to submit to professional discipline. For up to this time the patient, although steadily failing, had every day worn her usual clothing and occupied her accustomed places in the house.

August 23, 1876, the operation was done with the assistance of Drs. Huckins, Nichols, and Driver, the latter taking exclusive charge of the etherization. With the patient in the ordinary position, and the diagnosis verified, a uterine sound, with its concavity towards the vagina, was passed through the urethra into the bladder, and its extremity was used as a guide by which, with a knife, to make an opening into the cavity of that viscus just behind its neck. Starting from this puncture, an incision one inch long was made with the scissors backwards on the median line of the vesico-vaginal septum, the fleshy thickness and vascularity of which were very striking. The free hæmorrhage suggested the division of a vessel of considerable size, but the blood was found not to come from any single point.

An examination of the stone, now made with finger, showing the insufficiency of the opening already described, the incision was prolonged

until it was by estimate one inch and a half long, and thus gave a circumference of three inches. The calculus was seized with the utmost ease by a pair of lithotomy forceps with broad blades, and was thus removed very slowly from the bladder. The process of extraction subjected the whole edge of the artificial aperture to a good deal of visible tension and stretching. A measurement taken afterwards showed the circumference of the forceps blades, with the calculus included, to be four and one quarter inches. The instrument covered the mass so well that it was scarcely possible for the rough surface of the stone to do any injury to the lips of the wound by bruising or laceration. Nine carbolized catgut sutures distributed equally along the length of the wound and firmly tied rendered the bladder water-tight.¹ One curious fact is worth noting, namely, a decided acceleration of the pulse, which in its duration was simultaneous with the extraction of the stone. The stretching of the tissues connected with that step in the operation produced a slight shock or made some kind of an impression to which the system responded in this unmistakable manner.

A soft-rubber catheter was introduced, and the patient was placed in a natural position in bed, in a very satisfactory condition.

The amount of constitutional disturbance that ensued may be inferred from the following figures. On the evenings of the first, third, and seventh days the temperature was respectively 100.4°, 99.8°, and 100°. With these exceptions the thermometer never rose above 99°. The pulse attained its maximum of frequency, 96, on the evening of the second day. On the evening of the fifth day it had fallen to 72, where it remained permanently, with the exception of a rise to 84 on the evening of the seventh day. For some unknown reason the respiration was accelerated to 30, and sometimes more, per minute for several days. It is not worth while to enumerate all the details of a favorable convalescence, but I will allude chiefly to those facts which have an interest from their connection with the operation which had been performed. The slight nausea and vomiting that followed the ether had disappeared in forty-eight hours, and from that time the appetite, always quickened and improved by the use of the muriated tincture of iron, was well maintained. The muscular strength was not essentially impaired. On the evening of the third day the patient moved across the bed without assistance, and expressed a very strong wish to get up into a chair, which she was able and was allowed to do two days afterwards. On the fifty-seventh day, after having been dressed for several mornings, she went downstairs for the first time, and with no inconvenience. A temporary relief from long-standing pain and discomfort immediately followed the operation. On the third day the pain in the bladder and the pruritus vulvæ were entirely gone, although the former returned in a slight degree on

¹ The sutures were never again seen.

the fourth day. The sixth day followed the best night for three years. But the first week terminated with pretty frequent, sharp, short twinges of pain in the bladder. During the second week there was occasionally severe pain in the bladder, with, on one day, decided throbbing and a good deal of soreness. The pruritus returned with all its old fierceness, and again destroyed every chance of rest by day or sleep by night. It continued until about the beginning of the sixth week, when it began to abate, at first very gradually and then quite rapidly, and disappeared not to return up to the present time.

My plan of treatment intended to remove the soft catheter every twelve hours, and to replace it with another one known to be clean and pervious. But the fifth day brought loud complaints of the annoyance produced by the instrument, so that its constant use was suffered to be dispensed with, and the nurse, a handy and intelligent woman, was directed to introduce it at intervals not exceeding two hours in length. This new arrangement, not proving to be any more agreeable and comfortable than the previous one, at the evening visit the patient was directed to urinate in the ordinary manner once in from one to two hours, which she continued to do for two days, when it was evident that more or less urine was escaping into the vagina through the artificial opening.

The extreme sensibility of the parts rendered frequent examinations difficult and unwise, and the unavoidable resistance which it induced on the part of the patient prevented them from being as careful and complete as could be desired. On the fourth day the redness and swelling had entirely disappeared from the orifice of the urethra. On the eighth day the vagina was slightly red. The site of the wound was occupied and covered by a mass of yellowish-white material, one fourth of an inch wide, presenting ragged, irregular edges, and looking as though it could be easily detached. Urine was seen to collect quite rapidly in the vagina. On the thirteenth day this canal was more natural in color. The deposit on the wound had increased somewhat in extent, seemed to be more firmly attached, and was closely surrounded by a bright red elevated edge of swollen mucous membrane.

From this time I did not see the patient again until the forty-eighth day. During my absence she had two severe ill turns, both of short duration,—one of them marked by catarrhal symptoms, and the other by stupor.

Upon my return I found the patient in condition to walk about the room, and able, when sitting up, to retain urine and keep dry for two hours, but certain to suffer from incontinence when lying down. The site of the wound presented a firm, healthy-looking cicatrix, without any fistulous opening that could be discovered, although it was believed that one existed high up in the vagina.

The quality of the urine was in strong contrast with its former appearance. It was slightly turbid, with the least degree of fætor, and showed a small deposit of uric acid. No pus, blood, or mucus could be recognized by the eye. At the end of the fourth week from the operation it had acquired an acid reaction.

October 28th, on the sixty-seventh day, I satisfied myself that the wound in the vesico-vaginal septum was completely closed.

November 24, 1876, finds the patient in very good general condition, somewhat prone to imprudence, and taking the freedom of the house. She sometimes passes three hours in the day without relieving the bladder. By night urination occurs at shorter intervals, and interrupts the continued sleep that she would otherwise have. At this date the urine has an acid reaction, a density of 1013; shows a trace of albumen, and some pus corpuscles under the microscope. Quite an abundant deposit of uric acid occasionally appears.

To the operation of vaginal lithotomy Dr. J. Collins Warren, in his recent paper, has given an impulse and an interest for which I gladly acknowledge my individual obligations. His contribution attracted me with unusual force, and furnished fresh and definite information upon a subject to which no occasion had ever before directed my serious thought. As he says, the operation presents no intrinsic difficulties. To be sure, the facility with which its successive steps are accomplished must depend upon the dexterity of the surgeon, but no one with the least self-reliance or the slightest appreciation of the simplest surgical procedure need hesitate to attempt it. As to the method, while it seems to me that I should never practice anything but the longitudinal incision, Dr. McClintock suggests some advantages that might accrue from a transverse cut. "In the first place such a wound is more easily sutured; secondly, it is more likely to unite, in consequence of its being parallel with the muscular fibres of the vagina; and thirdly, it is less likely to burst or give way under distention of the vaginal canal."

For the management of the wound after the extraction of the stone two plans are proposed: the one, adopting the practice which is followed in the analogous operation on the male, leaves the wound to take care of itself, — either to unite by adhesion through some fortunate apposition of its free edges, or to be closed partially or completely by the slower process of granulation; the other plan directs the use of sutures, metallic by preference, to be applied at once with the idea of obtaining union by first intention. I adopted the latter for the reason that the only objection urged against this operation is the possibility of establishing a vesico-vaginal fistula.¹ It seems to me that the use of sutures is

¹ Compare this with the difficulty which is so often found in maintaining a free outlet for the contents of the bladder in those cases in which chronic cystitis is treated by incision through the vesico-vaginal septum.

the only means — and a tolerably sure one, too — of averting that misfortune, the existence of which, substituting a most repulsive infirmity for the previous disease, makes a fearful discount from the immediate and complete success of the operation. The only advantage of leaving the wound open is the application of the principle of drainage to the treatment of what may be called, without much violence to the proper use of terms, a suppurating cavity. But the cystitis in the case under consideration is consecutive and not idiopathic; and the extent and degree of it depend partly upon the duration of the disease, and largely upon the proportion in which are united the two elements of irritation, the weight of the calculus and the quality of its external surface, assuming, of course, the perfect mobility of the stone in the bladder. Hence it is not unfair to suppose that the inflammatory process which has been excited and maintained by a foreign body will begin to abate and its products to disappear as soon as the cause is removed. The course of events in my own case certainly justifies that expectation. It is the common result of the removal of foreign matters from other portions of the system. The safety of vaginal lithotomy is so nearly absolute as, when combined with the consideration of its simplicity, to exclude it from the rank of capital operations. The danger it involves is not to life, but, in view of the possibility of leaving a fistula, to the integrity of structure and function in the bladder. Yet so good are the chances of repairing and relieving this condition that the risks of this operation may be put down as nothing when compared with the hopeless, irremediable incontinence which may result from the dilatation of the urethra sufficient to allow the extraction of even a calculus of moderate size through that canal.

In conclusion, when I consider the extreme age and deteriorated condition of my patient, the state of the parts in which the operation was done, well described by one gentleman, who declared that I had nothing to deal with but "a rotten old bladder," the perhaps unwise stretching to which the tissues were subjected in the process of extracting the stone, and, finally, the complete though somewhat tardy closure of the wound, I think I can safely say that no surgical treatment, so simple in its nature and applicable to disease so important and so serious, carries in itself the promise of more satisfactory results than vaginal lithotomy.

Fifteen months after the operation the patient finds herself in excellent general condition. On account, as is supposed, of its persistent thickening and contraction, the bladder has never been restored to a normal state. Urination becomes a necessity once in two hours or less, and its frequency is quite as annoying and urgent by night as by day.

RECENT PROGRESS IN PATHOLOGY AND PATHOLOGICAL ANATOMY.¹

BY R. H. FITZ, M. D.

PATHOLOGICAL ANATOMY.

Amyloid Degeneration of the Heart and Endocardium. — A second communication with reference to this subject is presented by Heschl.² He states that the heart has been especially examined for the presence of amyloid material whenever the abdominal organs gave evidence of its presence. It was found that in about one third of these cases the heart was also affected. Although the gross appearances of the muscle and its simple microscopical examination gave no positive result, the latter was very distinctly obtained when aniline-violet was added. The degeneration was limited to the intermuscular substance, occurring in patches, and the endocardium was also degenerated in spots. In both instances the change seemed to be in the fibrous tissue itself.

Peripleuritis. — This term is applied to a suppurative inflammation of the fibrous tissue beneath the costal pleura, which arises independently of traumatic causes or of a preceding pleurisy.

Wunderlich first called attention to the affection, and cases were subsequently published by Billroth and Bartels.³ Recently the subject has again been brought forward by Riegel,⁴ who adds another to the series of cases.

The last writer states that the ætiology is still negative. The disease begins with chills followed by fever, the temperature throughout being elevated, but without any constant range. There are no characteristic physical signs when the quantity of pus present is insufficient to produce a bulging or a modification of resonance on percussion. The subpleural abscess shows but slight tendency to open into the pleural cavity. This result was prevented in most cases by pleural adhesions, but in certain cases there was no such evacuation, although adhesions were absent.

The symptoms vary according to the extent, severity, and seat of the process. The disease is most likely to be confounded with empyema. The following considerations favor the diagnosis of the peripleuritic abscess: a decided widening of an intercostal space, associated with a narrowing of those above, and fluctuation at the bulging part. The line of dullness is irregular and not affected by a change of position, and aerated tissue is present below this line. There is little or no displacement of the neighboring organs. The affected

¹ Concluded from page 559.

² Wiener medicinische Wochenschrift, 1877, xxvi., 625.

³ Referred to by Dr. F. I. Knight in the JOURNAL, October 14, 1875, p. 437.

⁴ Deutsches Archiv für klinische Medicin, 1877, xix., 551.

intercostal spaces are relaxed during inspiration and tense during expiration. The pus has a specific gravity of 1041, while that in cases of empyema is from 1028 to 1032. Diffuse inflammation of the kidney has been observed as a complication of this affection.

The prognosis is unfavorable, five of the nine cases previously reported having died, while only two completely recovered.

Abscess of the Lungs. — At a meeting of the Berlin Medical Society Leyden¹ calls attention to the rarity of this condition, and to the liability of its being confounded with pulmonary gangrene and subacute tuberculosis of the lungs (cheesy pneumonia). Traube has referred to the diagnostic importance of an examination of the sputum, and states that in it shreds of lung tissue might be recognized with the naked eye, and that elastic fibres, black pigment, and occasional rust-colored crystals could be found. In gangrene, however, the shreds of pulmonary tissue are readily crushed, and elastic tissue is not present. In pulmonary tuberculosis there are no shreds to be seen. It was Traube's view that the abscess developed from a pneumonia, and was preceded by an extensive destruction of tissue. Leyden admits that the pulmonary abscess and gangrene are not sharply defined, but run into each other, and yet the recognition of the simple, bland suppuration is of the greatest importance. The clinical course of the abscess resembles rather that of subacute cheesy pneumonia than that of gangrene. He considers that there are three varieties of pulmonary abscess: —

- (1.) The abscess perforating the air passage from without.
- (2.) The true pulmonary abscess, which includes those due to pneumonia, the embolic and metastatic forms, and those resulting from injury to the lung, as in the penetration of foreign bodies.
- (3.) The chronic pulmonary abscess, such as forms in chronic pneumonia, but distinct from the tuberculous cavity.

The true pulmonary abscess begins with symptoms of an acute pneumonia, which does not terminate critically on the seventh or ninth day, but the fever increases, the expectoration is retained, till in the course of three weeks an abundant purulent sputum appears, with alleviation of all the symptoms. This sputum is of the greatest diagnostic importance. It is very profuse, foamy, purulent, and liquid, of a stale, indifferent odor, although the latter may temporarily be sweet and penetrating. Shreds of lung tissue are evident to the naked eye, as well as others to be seen only with the microscope. They are imbedded in thick yellow pus, are of a grayish-black or yellow-ochre color, and vary extremely in size. These particles contain abundant elastic tissue, at times bits of large vessels, a moderate quantity of black pigment,

¹ Berliner klinische Wochenschrift, 1877, xvi., 218. Volkmann's Sammlung klinischer Vorträge, Nos. 114, 115.

crystals of fat (small, pedicellate, globular forms), delicate hæmatoidine (bilirubine) crystals of an ochre-yellow or rust color. The latter crystals were always observed, though they might be few or many, and were in the form of rhombic plates or of bundles of needles. Coarse, granular micrococci are present, either motionless or moving slowly, and differ widely from the active, rod-like bacteria of pulmonary gangrene. They are not acted upon by iodine, and thus differ from the leptothrix forms in gangrene. Pus-corpuscles and pulmonary epithelium are also found.

In the chronic pulmonary abscess the sputa are purulent or mucopurulent in character. They contain elastic fibres, which are evident on microscopical examination; also occasional, small, dense, slate-colored portions of lung tissue of a fibrous appearance. Plates of cholesteroline also are often seen; likewise fatty and mucous corpuscles, the latter often containing granules of fat.

Kidney in Scarlatina. — Dr. Klein¹ read a paper before the Pathological Society of London, giving the results of his microscopical examination of the kidney, liver, spleen, and lymphatic glands from cases of scarlet fever. The changes observed in the kidneys during the first week of the disease were as follows: an increase of the nuclei of the Malpighian bodies, hyaline degeneration of the inner coat of the minute arteries and of certain portions of the Malpighian bodies, multiplication of the nuclei of the muscular coat of the small arteries, and, finally, the swelling, nuclear increase, and granular condition of the epithelial lining of the tubules.

The changes taking place after the first week are described as a cellular infiltration around the tubules, and the results of a parenchymatous nephritis.

The alterations met with in this affection are therefore both parenchymatous and interstitial, the latter being constantly found, although regarded by certain authors as of rare occurrence.

The hyaline change is the same as that described by Gull and Sutton, and has also been seen by Klein in cases of typhoid fever.

The alterations found in the examination of the other organs above mentioned resembled those in the kidney.

One of the patients whose organs were examined was an adult who died of pneumonia forty-four days after the attack of scarlatina. The renal changes, both parenchymatous and interstitial, were slight, and it was inferred that recovery from the interstitial affection was taking place.

Fatty Degeneration of the Renal Epithelium. — The experiments of Zielonko, showing that constriction of the aorta occasionally produced a fatty degeneration of the kidney, suggested to Von Platen² a more

¹ Medical Times and Gazette, 1877, i., 487.

² Virchow's Archiv, 1877, lxxi., 31.

direct method of bringing about a like result. He endeavored to ascertain the effect upon the kidney following a constriction of the renal artery by means of a ligature.

The immediate effect was a permanent diminution of the arterial supply and a lowering of the arterial tension, in consequence of which the nutrition of the epithelial cells of the kidney became impaired, and fatty degeneration resulted. If the artery was completely obstructed necrosis followed, and no fat was found in the affected kidney. Simple atrophy of the kidney, which also indicates a disturbance of nutrition, may likewise be produced artificially by ligation of the ureter. The resulting atrophy is to be attributed rather to the anæmia induced than to the mere pressure of stagnant urine.

In all these experiments the common factor leading to retrograde changes in the structure of the kidney is anæmia. When the nutrition is rapidly enfeebled fatty degeneration of the renal epithelium quickly takes place.

Chronic Interstitial Nephritis. — A series of anatomical and experimental investigations concerning the disturbances of the circulation in the kidneys in chronic interstitial nephritis has been made by Thoma.¹

He states that this affection is essentially the result of growth of fibrous tissue, which begins in the immediate vicinity of the interlobular arteries and veins, especially in those near the surface. This process eventually becomes widely extended, and produces, through shriveling, a simple atrophy of the epithelial cells and a decided diminution in the size of the organ. The capillaries are diminished in number, numerous Malpighian corpuscles are destroyed, and the afferent arteries are brought directly into continuity with the efferent vessels or with the veins. The walls of the blood-vessels become exceedingly permeable, granules of cinnabar even passing through the unruptured vessel and entering the fibrous tissue. Structural alterations in the vessel walls were also found, to be classified as a chronic fibrous endarteritis or mesarteritis. He does not consider it possible to determine that these alterations of the arteries are primary and a cause of the secondary changes until the analogous processes in other organs have been thoroughly examined. At present neither the chronic endarteritis (the hyaline-fibroid degeneration of Gull and Sutton), nor the increased permeability of the vessel wall, nor the growth of the connective tissue can be regarded as the primary cause of the disease.

The destruction of the capillaries and the greater permeability of the walls of the vessels produce a decided slowing of the arterial current, and an increased blood tension in the branches of the renal artery. A sufficient explanation of the albuminuria is thus afforded. The other characteristics of the urine in chronic interstitial nephritis may be ex-

¹ Virchow's Archiv, 1877, lxxi., 42 and 227.

plained by an abnormally rapid capillary current in consequence of the increased arterial tension.

Cysts of the Vagina. — Von Preuschen¹ calls attention to the difference of opinion concerning the method of origin of vaginal cysts, and states that his examination of several specimens shows that they are retention cysts of the vaginal glands. This opinion had been previously suggested by Virchow. The anatomists, however, do not agree as to the presence of glands in the vagina, and some of them have suggested the canals of Gärtner as the probable place of origin.

Cryptic glands were found in the vagina, and possessed a structure analogous to that of the sebaceous glands of the vulva. Several pouches unite in opening upon the surface by a common terminal duct, and cysts may form in either part of the gland. If in the duct the epithelial wall is stratified and composed of pavement cells. The pouches, which are lined with ciliated epithelium, are much more frequently dilated, thus giving rise to cysts. When several adjoining pouches are simultaneously dilated the intervening walls become atrophied and disappear, and larger cysts are thus formed. The statement concerning the rarity of these cysts was not borne out by the present series of observations, and numerous cysts were present in several cases. They were not limited to particular portions of the vagina, although perhaps rather more frequently met with in the upper third and in the posterior wall of this canal.

It is further considered as possible that cysts might arise from obstruction of and retention of secretion in Gärtner's canals, although there is no evidence of the persistence of these foetal organs in the human species. Furthermore, the cysts which are seated in the upper part of the vagina cannot thus arise from the mere fact of their position.

PROCEEDINGS OF THE OBSTETRICAL SOCIETY OF BOSTON.

C. W. SWAN, M. D., SECRETARY.

DECEMBER 9, 1876. *Vaginal Lithotomy.* — DR. HOSMER read a case of vaginal lithotomy.² In answer to questions, Dr. Hosmer stated that he had used carbolized catgut ligatures so as not to be obliged to remove them; they were not removed. Dr. Hosmer said that he had been much impressed in his medical pupilage with the apparent difficulty of passing sutures for the purpose of closing and uniting the wounds incident to the operations for cleft palate and vesico-vaginal fistula. To obviate the supposed difficulties a needle with an opening eye was used and often exhibited by Dr. J. Mason Warren. It was not his invention, as Dr. Hosmer had long taken it to be. Dr. Warren

¹ Virchow's Archiv, 1877, lxx., 111.

² See page 579 of the present number.

accredits it to another, in the Transactions of the American Medical Association, vol. xvi., page 375. The instrument Dr. Hosmer had never used. It seemed to him to involve an unnecessary complication of what may be accomplished by a very simple process. He found no difficulty in introducing sutures high up in the vagina.

DR. ABBOT asked Dr. Hosmer what he considered the comparative merits of lithotripsy in cases similar to that just reported.

DR. HOSMER replied that the bladder was in a bad state, the walls were thickened, the urine showed an unhealthy condition, there was a large body of stone, one session of operation would not be enough, the temperament of the woman was such as to make her dread excessively operative interference, instruments, and ether; that he considered these serious objections to lithotripsy. Dr. Hosmer referred to a case cited by Dr. J. Collins Warren,¹ in which although the operation of lithotripsy entirely removed the stone, yet the repeated sittings induced a degree of exhaustion which was fatal to the patient very soon after the operation, simply as a remedy for the disease, became a complete success.

DR. WELLINGTON asked Dr. Hosmer if he would not again apply ligatures in case the union were imperfect as a result of the operation.

DR. HOSMER replied that the only objection urged against letting it alone is the possibility of having a permanent vesico-vaginal fistula. As it was, in the case reported, he did not get union by first intention, but at the time of reporting the case the union was complete. Of this fact he first assured himself on the sixty-seventh day from the operation. Dr. Hosmer said that he washed out the bladder with a view to the relief of its unhealthy condition.

DR. CHADWICK said that perhaps it was fortunate that the sutures had not produced union by first intention. Dr. Emmet had shown that cases of severe chronic cystitis healed much more readily when the urine had a free escape through a vesico-vaginal fistula. He had effected cures in many cases by establishing such channels for the drainage of the bladder when all other means of treatment had failed. If this disease is allowed to exist for a long period there is danger that the inflammation will extend to the ureters and kidneys. Dr. Chadwick remarked that in Emmet's cases difficulty was often experienced in keeping the fistulæ open. For this purpose Emmet sometimes used a glass eyelet.

DR. HOSMER replied that he thought it fair to make a distinction between the two classes of cases, — idiopathic and consecutive. If a calculus lies in a bladder previously healthy, the symptoms become more and more severe till the calculus is removed. There is a tendency to recovery in that case which would not have been in a case of idiopathic cystitis of long standing.

DR. CHADWICK said that while admitting the weight of the objection, he should consider the condition of the bladder to be quite similar in the two classes of cases.

DR. ABBOT suggested that the fistula in Emmet's cases is designed to keep the bladder empty. In these there would be a free discharge by way of the

¹ See Communications of the Massachusetts Medical Society, 1876, page 99, lines 27 and 28.

vagina, while in Dr. Hosmer's case there was only a slight leak, which could hardly have had any influence on the result of the case.

DR. CHADWICK stated that the bladder would not empty through the urethra until somewhat filled, when it would be incited to contract. Emmet seeks to prevent all contraction of the bladder by keeping it entirely empty.

DR. HOSMER, in answer to a question by Dr. Abbot, said that the bladder emptied itself chiefly through the urethra, the patient carrying her water for two hours in the day, the leakage occurring principally in the night.

This answer applies to the period which intervened between the time at which the patient first sat up and the date at which the closure of the wound became perfect and complete.

DR. LYMAN remarked that one cannot judge by Emmet, who is so skillful and has such trained assistants, and described the operations which he saw performed by Emmet upon a patient who had rupture of the perinæum, vesico-vaginal fistula, and eversion of the neck of the womb.

Labor with Twins; Arm Presentation; Locked Heads; Inability to deliver the Presenting Child by turning until the Upper Child had been turned and delivered; both living. — DR. ARNOLD read the case.

Mrs. S., aged thirty-eight, German, a large, somewhat fleshy woman, in her fifth pregnancy. When called (February 16, 1868, about six o'clock A. M.) she had been in labor several hours, attended by a midwife. According to her account the pains during the last two or three hours had "slackened off," and were more and more irregular; the previous three or four hours the pains had come "strong and fast." Examination discovered a left hand at the vulva, an arm in the vagina, a head high up, a roomy pelvis, and an os fully dilated. The exact relation of things I could not, at least I did not, make out at this stage of the labor. The parts were soft, moist, and yielding, the arm and hand not swollen, as is usual on such occasions; pains were irregular, both as to frequency and strength. Sometimes there was a prodigious one which seemed to hurt her a good deal, but for the most part they were "growling pains," and entirely ineffectual. Pulse somewhat accelerated and firm. Skin warm and moist. She evidently had been perspiring freely. Temperature normal. The size and irregular contour of the abdomen first gave the suspicion of twin pregnancy. As turning was the thing to accomplish, I at once gave her ether. The head belonging to the arm in the vagina seemed to be held in a cul-de-sac above the left ramus of the pubes. Diagonally opposite or nearly so, perhaps a little to the front, was another head also seeking exit; the locking was effectual, and neither child advanced. The head of child No. 1 would not be displaced as usual, nor could any manipulation of mine induce it to take its proper position, nor would the hand and arm stay up when replaced nor keep out of the way. In the manœuvring, the membranes of child No. 2 were broken. Until this time they remained intact, but contained little fluid. It became plainly evident, as soon as my hand passed into the uterine cavity, that child No. 2 was the only one I could turn; from the very nature of things it was the one to turn. It was with great effort and a long arm that I secured only one of the nether extremities of child No. 2, but once having got hold of

them, or rather it, the turning was accomplished with less difficulty than I had anticipated; in fact it rolled over quite easily.

I thought that having changed the position of the children, No. 1 might possibly come forward and redeem itself, for I had some misgivings as to being able to get the head of No. 2 to pass the strait, but with its usual obstinacy it declined. No. 2 was then made to follow along as rapidly as practicable, which it did well enough until it came to the head and shoulders. The arms were brought down with much difficulty, as they were so high up, and after severe traction with my finger in the mouth the head of a living child was delivered. Turning of the other was accomplished without trouble, and the child was born alive. No. 1 weighed seven and one fourth pounds, No. 2 six and three quarters pounds, both male. The hæmorrhage was considerable, but was easily controlled, and mother and children did perfectly well.

Placenta Prævia; Twins; Labor at Seven and a Half Months. — DR. ARNOLD reported the case. The placenta was detached and allowed to come down into the vagina. There was some difficulty in turning, as in the previous case. Both children presented heads, and the one whose head was highest was the first to be delivered. The only delay in this case was that the uterus was unable to expel its contents.

Vital Statistics for 1875 in the State of Massachusetts. — DR. DRAPER said that in an analysis of the vital statistics of Massachusetts for the year 1875 he had determined certain interesting conclusions concerning mortality in its relation to sex and age. It was generally believed that the decade of life between forty and fifty, covering the period of the menopause in women, was particularly critical to the female sex, and that fatal diseases were apt to develop at that time. The statistics of 1875 did not confirm that impression, so far as Massachusetts was concerned. The death-rate of women between forty and fifty years old was 12.4 per 1000 of the living; that of men at the same ages was 13.5 per 1000. The death-rate of males at all ages was 21.8, and that of females at all ages was 20.5 per 1000 living. The general death-rate, at all ages and for both sexes, was 21.2.

Another interesting matter was found in the mortality from the accidents and complications of childbed. In 1875 there were registered two hundred and sixty-nine deaths in childbirth, nineteen deaths from puerperal convulsions, and ninety-nine deaths from puerperal fever, an aggregate of three hundred and eighty-seven. In 1874 the mortality from these causes was precisely the same in total, but distributed a little differently. These three hundred and eighty-seven deaths were 0.85 per cent. of all the registered births in 1875, and 0.82 per cent. in 1874. In 1875 there were one hundred and seventeen children born to one fatal accident of childbed; in 1874 the number was one hundred and twenty-two.

These numbers do not include a small fatality from hæmorrhage due to unspecified causes, nor is any allowance made for possible deficiencies in registration.

Dr. Draper, in answer to a question by Dr. Chadwick, said that the data were obtained from the registration officers throughout the State.

DR. CHADWICK said that in compiling statistics of infant mortality from

the registrar's books he had found the comparisons which he had sought to make with the birth-rate vitiated by the fact that all infants who were reported as having died under one year of age were at once entered as having been born in the city.

DR. DRAPER replied that he did not think the statistics were open to serious errors in such cases as he had referred to, because a death from either one of the causes mentioned is of so striking and unmistakable a character as scarcely to admit of uncertainty as to its nature.

DR. INGALLS remarked that in some towns the town clerk sends in for a list of births and deaths.

DR. WELLINGTON said that in Cambridge a man was sent about to ascertain the number of births during the year.

DR. DRAPER said that the returns were obtained by an annual or semi-annual canvass, and that in the present condition of the populations as regards density this was the most practical and accurate method in his opinion.

Puerperal Convulsions. — DR. WELLINGTON reported the case, which he saw, the evening before, in consultation with Dr. Taylor. For two months previous to labor the woman had exhibited the symptoms of dropsical swelling, headache, and pallor. On the day before his visit the labor began and convulsions occurred. At that time the os was not dilated. The convulsions were severe, and but partially controlled by ether. Dr. Taylor dilated the os with the fingers, and in the course of the day or night it was large enough to admit of turning and delivery. The convulsions, however, did not cease. The ether was less efficacious than it is ordinarily in such cases. In the evening, at the request of Dr. Taylor, he visited the patient with him. Her condition was bad; she was unconscious. The pulse was feeble. She had been etherized freely, and had taken a moderate amount of chloral. Bleeding had not been resorted to, as the case was not a suitable one for this procedure. It was decided to try morphia, and accordingly a quarter of a grain was injected into the arm. The next fit was in every way milder; two more occurred, and then a second quarter of a grain was injected. No more convulsions ensued, and the patient had a quiet night. The next morning consciousness had returned, and she was comparatively comfortable, with a pulse of 120. Strong hopes were entertained of her recovery. The use of the morphia was begun about thirty-six hours after the beginning of labor.

The patient died a week later, apparently from pyæmia. She had no more convulsions.

DR. LYMAN said he could not understand why morphia should not be given in all such cases.

DR. SINCLAIR asked how the ether had been given.

DR. WELLINGTON replied that it had been given continuously.

DR. SINCLAIR remarked that if the patient be allowed to recover the sensibility of spinal irritation convulsions may ensue, while continuous etherization would prevent them.

DR. ARNOLD mentioned a case in which convulsions had continued to occur for twenty-four or thirty-six hours after delivery, but were at once arrested by the administration of a turpentine injection. Confinement took place August

30, 1867, and was one of the first cases in which the os uteri was dilated fully from the first, until forceps could be applied, that occurred in his practice.

Catheterism. — DR. CHADWICK described a method of passing the female catheter, which differed somewhat from the ordinary method, and was easier for both patient and physician. The paper will be published in full.

Typhlitis. — DR. STEDMAN exhibited the specimen and gave an account of the case.¹

DR. LYMAN said he had never met with cases of this disease in which there was not acute pain, more agonizing even than the pain of peritonitis, and strictly localized, and instanced two cases. There was also a constant feeling on the part of the patient, not exactly of tenesmus, but as if a movement of the bowels would relieve the pain. He had, therefore, felt some doubt about the diagnosis, though disposed to coincide with Dr. Stedman when he saw the case; he asked for the experience of members in the symptoms of the disease, and also whether any had seen cases of suppressed scarlatina.

DR. WELLINGTON replied that he had noticed that the pain was chiefly local, but did not recollect that the patients had complained of a constant desire for a movement of the bowels.

DR. INGALLS recalled two cases which occurred in the City Hospital three years ago. In these the pain was not of the character observed by Dr. Lyman, but more like a belly-ache than an acute pain; what pain there was, however, was strictly localized. There was no other acute disease present in either of the cases.

Feline Monstrosity. — DR. ARNOLD exhibited the wet preparation of a double-headed kitten. It had four eyes and two mouths, and lived several days.

VIRCHOW ON THE PENGE CASE.

WE are glad to find that the foremost of living pathologists, who, like us, can look quite impartially on this remarkable trial, should have come to the same opinion which we expressed two weeks ago, to wit: that the medical evidence did not justify conviction. After the commutation of the sentence of the accused, Professor Virchow published a review of the medical evidence in the *Berliner klinische Wochenschrift* of October 29th,² which is not only most instructive but most entertaining reading. We modestly limited our discussion to the bearing of the medical evidence, but the veteran pathologist does not conceal his contempt for the manner in which the examination was made. He criticises severely Drs. Longrigg and Wilkinson, but later he turns on their critics, Drs. Greenfield and Paine, and one fares as badly as the other. No one escapes unscathed. Professor Virchow claims, very justly, that the greatest accuracy in the report or protocol of the examination should be insured by legal enactments, as it is in Germany, and points out that the want of this accuracy is one of the prime causes of distrust of medical evidence. "What sort of an opinion must judges, ministers of state, or indeed the public gener-

¹ See JOURNAL, December 28, 1876, page 756.

² An English translation will be found in the Medical Examiner of November 1st.

ally form with regard to professional men who are not only unable to ascertain facts, but whose evidence with regard to facts which have come under their mutual observation is of such a conflicting character!"

He dwells on the discrepancy of the notes taken concerning the apparently tubercular deposit in the membranes of the brain, and on the confusion that a want of knowledge of the anatomy of the arachnoid gave rise to, and is particularly severe on the use of the word "small" as applied to pathological changes. We quote from him again: "Dr. Wilkinson says, 'The brain and membranes were healthy, with the exception of a small recent patch of tubercular deposit upon the arachnoid membrane on the upper part of the left hemisphere about the size of a four-penny piece.'

"The only fourpenny-piece which I possess is twenty-one millimetres in diameter. This is not inconsiderable, and in Germany scarcely any one would say that a deposit of tubercle in the pia mater to that extent was a small one."

Later he takes up Dr. Wilkinson's description of the apex of one lung, in which there was said to be "a small patch about one and a half to two inches square, containing tubercular deposit (gray and hepatized)." "Here," says he, "we have another extraordinary definition of size. A patch of one and a half to two inches square (probably cubic measurement is meant) we should not describe as small, and if the inclosed mass was recognized to be gray and hepatized it would be hardly possible for any one of us to decide on describing off-hand this hepatization as inactive. It is very evident that these experts have yet to learn terminology. They use medical terms partly of their own invention and partly on trust, and their hearers may draw such conclusions of their own as may appear to them to be correct."

He makes the very just criticism on Dr. Greenfield, who wrote strongly for the defense, and whom the *Medical Times and Gazette* apparently followed in saying that the autopsy showed death by tubercular meningitis, that he "quite puts aside the possibility that the case was one of starvation." Professor Virchow concludes with the following patronizing words, which, no doubt, will be very soothing to our British cousins: "This is my opinion, plainly expressed. May it assist in conveying clear views to the other side of the Channel, and in introducing elementary knowledge, method, trustworthiness, and wise reserve into medico-legal practice."

THE WARREN PRIZE.

We are glad to give place to the following announcement of the Warren triennial prize, addressed to the Editors:—

The Warren prize committee, consisting of the visiting physicians and surgeons of the Massachusetts General Hospital, have awarded the prize of the present year, amounting to \$371.41, to E. O. Shakespeare, M. D., of Philadelphia, for an essay On the Healing of Arteries after Ligation.

The committee also announce that the subject for 1880 will be Original Observations in Physiology, Surgery, and Pathological Anatomy.

Essays should be forwarded to the resident physician, Massachusetts General Hospital, Boston, on or before February 1, 1880. The amount of the prize will be \$400. Your obedient servant, R. M. HODGES,

Secretary Physicians and Surgeons of the Massachusetts General Hospital.

November 13, 1877.

The conditions of the prize lately awarded were similar to those given in the announcement, the object, we understand, being to stimulate original researches. As evidence of the success of the plan to leave to the competitors the choice of a subject within certain limits, it may be mentioned that the number of essays presented was large. We learn that a dissertation on Pneumodynamics and one On Certain Points on the Physiology of the Nervous System were highly praised by the committee for their merit. A third, On Bone, was much admired for the superb illustrations which accompanied it and the great labor which its preparation evinced, particularly that portion devoted to Dentine.

The success of the committee in thus bringing out work of a high standard from original investigators is a subject for congratulation. This is but the second award which has thus far been made, and the reputation of the prize, if we may use the term, may be said already to be established. We are happy to hear that essays were sent from distant portions of the country, and it is rumored that one came across the Atlantic. Both prizes hitherto awarded have been captured by Philadelphia. While hoping that the participation in the contest for the coming prize may be general, we should be glad to see it carried off by one of our fellow citizens, and thus justify the reputation which our city possesses for "higher medical education." We trust, at all events, that many may thus be stimulated to contribute to the cause of medical science.

THE ABUSE OF MEDICAL CHARITIES.

THE interest in this subject is decidedly on the increase, and we hope that such of our readers as have given attention to it will favor us with their views. We have only to suggest that those who agree with us should state their opinions with great mildness, or they may give offense to an extent they never dreamed of. We had supposed that the justice of Dr. Davy's remark that a young practitioner needed some little income apart from his profession was so universally acknowledged as to make it innocent to quote it, but Dr. Rogers tells us that "if the defense of the present system involves the necessity of drawing a money line in the admissions to the profession it may ultimately prove more creditable not to undertake its defense." We have not the least idea what this means, but we feel that it is severe. We should be slow to forget that many eminent men have worked their way from poverty by their ability and perseverance, but they are rare exceptions, and all of them were animated by great enthusiasm and supported by merit; but there is another picture which is far more common and less pleasant. It is that of young men once honest and earnest, some indeed of even brilliant promise, who from want of pecuniary success in their early years of practice have taken to doubtful

professional courses and less than doubtful associates, and who in all the larger cities present a perfectly well-known type and constitute what we may call the dangerous medical class. Once they wished to do right, but the need of money was too much for them. The story is as sad as it is true.

Now would these men, or even some of them, have been saved had it not been for out-patient departments? Dr. Rogers would no doubt say, "Yes," for he differs from us in thinking that closing these departments would materially assist the young practitioner. Mere assertion on either side is useless; we hope some one will favor us with evidence, if there be any.

The *Medical Record* affects to be able to answer our assertions, but declares that they are not to the point. The writer surely has seen but little of minor surgery if he does not know that it is better practiced at clinics than by the quacks, apothecaries, and ignorant practitioners who cannot recognize fractures of the lower end of the radius and who "draw" felons. The main argument of the *Record* is that the present system is demoralizing the community; we frankly admit that it has its evil side, but we cannot approve of closing dispensaries and out-patient departments, and what other remedy is there?

MEDICAL NOTES.

— The *Medical Times and Gazette* calls attention to a recent paper by M. Lunier on Alcoholism in France. The writer observes that wine is the true national drink, of which the mean annual quantity consumed for the last ten years has been fifty million hectolitres, about one hundred and twenty litres per inhabitant per annum. The consumption of cider has diminished; that of beer has been constantly increasing, so that it has augmented from about 8.25 litres per head in 1825 to about twenty-two litres at the present time. The consumption of alcohol has progressively increased for the past forty years from two litres per head in 1839 to nearly three litres now. The departments which consume most alcohol are those which do not consume wine. The alcohols of commerce are more mischievous in their action than wine. Accidental deaths due to excess of drink are for the most part met with in the departments which consume most alcohol. They rarely occur in those in which wine is drunk. Prosecutions for drunkenness are five times more numerous in the departments which consume alcohol than in those where wine is drunk. It is the same with cases of insanity due to alcohol, the proportion being almost everywhere in direct relation to the consumption of alcohol, especially the alcohol of commerce.

— During the past year, it is reported, that at Kiukiang, in China, there has been an alarming mortality among dogs, due to worms in the heart. The left ventricle has in some instances been found to be almost completely filled with them, but the reporter, Dr. Jardine, believes them to be comparatively harmless as long as they remain in the cavities of the heart, and that it is only when they obstruct the passage of blood through the orifices or impede the action of the cardiac valves that they prove fatal. No clue has been obtained as to their origin.

— The *Lancet* states that official reports show that there are now two faecal

ties of medicine in Brazil, one at Rio and the other at Bahia, towards which the state contributes from thirty thousand to thirty-five thousand pounds per annum. It appears that the profession is very popular in that country, and that young men of good fortune, who have no serious intention of practicing, not unfrequently graduate as doctors of medicine, much as the same class in England are called to the bar. The course of both faculties extends over six years. A total of seven hundred and fifty students matriculated in 1874, and eighty-five degrees of doctor of medicine were conferred in the same year. Foreigners who wish to practice are required to pass an examination, for which a diploma from any recognized European medical college qualifies.

— MESSRS. EDITORS, — Doubtless many of your readers remember, among the various relics on the walls of the room of the Massachusetts Medical Society, a large old engraving of the room — “In Bolt Court” — of the Medical Society of London, and some twenty of its leading members attentively listening to the famous Dr. Lettsom, whose lank, tall figure in Quaker dress is standing in the foreground. The print was published in London in 1801. Many years since, during one of my frequent strolls among the old book and print shops and stalls of New York, I discovered that, singularly enough, the original “copper” was owned by Mr. A. Dexter, 50 West Thirty-First Street, in that city, but I was unable to obtain an impression. A few days since, Mr. Dexter sent me word that he had struck off ten copies. One of these I have just received. The plate is evidently little worn, for my copy is quite a good one. It is possible that some of the readers of the JOURNAL may be interested to know the facts that I have stated. The twenty-two heads are all portraits, and the names are inscribed in the margin of the print. Among them are Jenner, Lettsom, Woodville (the famous vaccinator), Ware (the ophthalmologist), and Sims (the president). The likeness of Jenner is a good one, as indeed are all those of which I am able to judge by comparison with portraits of acknowledged excellence.

H. A. M.

37 DUDLEY STREET, November 8, 1877.

BOSTON CITY HOSPITAL.

SURGICAL CASES OF DR. GEORGE W. GAY.

[REPORTED BY O. H. MARION.]

CASE I. *Amputation of Arm for Railroad Injury; Torsion; Recovery.* — E. H., age eight years, was found on the railroad track with his right arm crushed, September 24, 1877. He was brought to the hospital in a semi-conscious state, unable to give any account of the accident. The right arm was crushed at and above the elbow to within three inches of the shoulder-joint, and was attached only by the large vessels and nerves and a small strip of skin. There was a scalp wound over the right parietal bone, extending through the pericranium and laying the bone bare for an inch. The boy was pale and restless, and had a pulse of 80, of fair condition, with warm extremities, and there was no vomiting. Ether having been administered Dr. Gay amputated the arm, sawing the humerus about two inches below the shoulder-joint. The

arteries, three in number, were readily secured by torsion, and no ligatures were applied. An irregular external flap was made, a portion of it being composed of the skin torn up by the car wheel or whatever caused the injury. It was accurately and carefully closed by silk sutures, and no provision was made for drainage. A compress wet in compound tincture of benzoin was applied and secured with a bandage. The scalp wound was dressed in the same manner.

The patient vomited several times, and had five thin stools during the night. He was put upon enemata of milk and brandy, with a little laudanum, until vomiting ceased. Forty hours after the operation the wounds were redressed. They were dry and free from any discharge, and the patient was very comfortable indeed. Diarrhoea and vomiting had stopped, and he was taking food well.

The next day (September 27th) there was considerable oozing of a thin fluid from the stump. Two sutures in the centre of the wound were removed, and a small silk seton was gently introduced. The same dressing was continued. Six days after the operation the sutures were all removed; the discharge was slight, and was of an oily nature like synovia; the flaps were united in two thirds of their extent; there was and had been no pain, chills, or any other unfavorable symptoms whatever.

October 11th (seventeenth day). The little fellow was out of his bed, feeling well. He was discharged in twenty-nine days entirely recovered.

[*Remarks.* This is the second case of amputation for railroad injury to the arm in children in which we have used the flap of skin made by the train with success, and, furthermore, we have as yet seen no bad results from such a course. Even if the flaps do slough, a patient, in many instances, is safer in undergoing two moderately severe operations, one of them being secondary, than he would be if the shock of the injury were increased by that of an amputation through comparatively sound tissues. The patient's safety is the first question for consideration, and a comely stump the second.

This is the thirteenth major amputation in this hospital in which the hæmorrhage has been controlled by torsion. This method has never failed, with one exception, and has in no case been followed by hæmorrhage. The essential point for its success is to thoroughly separate the artery or vein from its sheath. The only failure experienced by us occurred in the first case in which the method was tried, and was due to our neglect of this precaution.

Dr. Fildes has used torsion in two cases of amputation of the arm, two of the leg, and one of the thigh. We have used the method in one amputation of the arm, two of the fore-arm, three of the leg, one of the knee-joint, and one of the thigh. After a little practice a vessel can be twisted almost as readily as it can be tied. Small vessels which cannot be easily separated from their sheath are not suited to this method, and had better be secured in some other way.

If future experience should prove that catgut does not act as a foreign body in a wound it would seem that that material must supersede all others for securing vessels. Mr. Holmes, in his last work on surgery, gives his preference to this material as a ligature over torsion for the reason that most sur-

geons would feel safer in knowing that the vessels had been tied with something than that they had been simply twisted. — G. W. G.]

CASES II. and III. *Inguinal Hernia treated for Radical Cure by Heaton's Method.* — O. McL., a waiter, age twenty-four years, had a reducible hernia of six months' standing. He had worn a truss. The rupture was oblique and situated on the right side. The external ring very readily admitted the forefinger and invaginated scrotum a considerable distance.

September 9, 1877. The hernia having been reduced Dr. Gay injected about ten drops of the white-oak bark solution. A firm compress and bandage were applied, and the patient was put to bed.

M. S., a sailor, age, thirty-four, entered the hospital September 8, 1877, with a rupture similar to that of the preceding patient, of seven months' duration.

It was reducible, and he had never worn a truss. The same operation was performed upon this man as in the last case, and on the same day. The two patients were treated precisely alike. Neither patient had much pain during or after the operation. Ether was not used. Opiates in very small doses were required for a few days to keep the bowels quiet. There was no subsequent tenderness or swelling over the hernia. At the end of three weeks the external ring in both cases was reduced fully one half in size, and the bowel showed very little tendency to come down when the patients stood up. The first patient was discharged in five weeks, wearing a bandage. The second was discharged in four weeks, and advised to wear a light truss, as his work as a sailor is very laborious.

[*Remarks.* These two cases are reported, not as cases of cure, but to show the condition of the parts at the end of a few weeks. There was certainly great improvement, but it is to be feared that without some support the rupture will return. The operation would seem to be comparatively free from pain and danger, and furthermore to promise a certain amount of benefit. It deserves further trial. — G. W. G.]

LETTER FROM PHILADELPHIA.

MESSRS. EDITORS, — Business interests, as a rule, are dull enough at present in Philadelphia, and show scant signs of speedy amelioration. Judging, however, from the unusual numbers of students in attendance upon our various hospitals and the college lectures, we conclude that medical matters are decidedly prosperous, in so far, at least, as the success of our schools may be taken as the measure or exponent of that prosperity. At Jefferson College it is already evident that the class of last year will be equaled, of which it was said that "it was a larger number than ever convened, at one time, in any other medical school in the country." The new experiment of the University of Pennsylvania, just inaugurated with the opening of the present session, has been already — we hope not too hastily — pronounced "all that could be desired. There are one hundred and thirty first-course students entered for the three years, and the general paying class is as large as it was last year."¹

¹ Philadelphia Medical Times, vol. viii., p. 35.

Some peculiar circumstances attended the opening exercises of the two medical schools which render them especially noteworthy. According to custom both colleges began upon the same day, the address at the University being delivered at noon, that of the Jefferson in the evening, of the first ultimo, being the first Monday in October. Dr. William Pepper, professor of clinical medicine (one of the new chairs instituted in 1876), was orator at the University, while at the Jefferson the introductory lecture was delivered by Dr. Robert E. Rogers, professor of chemistry, who, it will be remembered, was for a quarter of a century a member of the faculty of the University of Pennsylvania. The theme selected by Professor Pepper was Higher Medical Education, in which he discussed the plan recently adopted at the University. Professor Rogers also devoted a few remarks, at the close of his address of welcome to the students, to the demonstration of what the Jefferson has been quietly and unostentatiously doing for the cause of medical progress, and its present ability to sustain a reputation firmly established by more than fifty years of uninterrupted prosperity and success. Ten years ago the faculty of Jefferson College originated a plan for a summer course of lectures, commencing the last week in March and closing at the end of June for a summer vacation, and an autumn course, beginning on the first Monday of September and continuing until the opening of the winter term, on the first Monday in October, making an almost unbroken period of nine months of lectures and study in each collegiate year. Five years later the same authorities, in order to have a graded course and induce students to give three years to their college education, instituted a rule that "those students who have attended two full courses on anatomy, chemistry, materia medica, or institutes, may be examined on any of these branches at the end of their second course." They are thus enabled to devote their last (third) course entirely to the didactic lectures on the remaining branches, and to clinical study in the college hospital and dispensaries, or in walking the other hospitals. The feature which, of all others, has distinguished the career of this school and contributed more than anything else to its just popularity and renown, to which, of all the schools in the country, it was the *first* to give prominence, and to which it has, with improving advantages from year to year, earnestly adhered, has been *systematic clinical instruction*, to which might be added with propriety the statement that clinical lectures are delivered on each day of the week through nine consecutive months in the year.

In the rear of the college building has been erected the Jefferson College Medical Hospital, five stories high, complete in all its equipments as a hospital of the first class, which is now open and receiving patients. Being especially erected with a view to clinical and bedside instruction, it has a well-lighted commodious amphitheatre on the first floor, capable of seating seven hundred students, in which daily clinics are held during the summer and winter sessions. A detailed description of this building may be found in the editorial columns of the *Philadelphia Medical Times* for October 27, 1877.¹

With a view further to improve the resources of the school the board of trustees are erecting and will soon have completed a new four-story building adjoining the Medical Hall on Tenth Street, provided with spacious rooms

¹ Also in the JOURNAL, vol. xevi., page 236.

for the reception of apparatus, the additional museum, and supplemental dissecting-room, and for laboratories for practical instruction in minor surgery, chemistry, physiology, and microscopy, wherein the student may, by personal manipulation, familiarize himself with the details of these several important branches of his professional studies.

Professor Rogers concluded his address with the statement of the present organization of the college faculty and hospital staff, followed by this peroration : —

“ Under a general management of the institution so watchful and judicious, with a faculty aided by a corps of associates in the hospital staff and dispensary service, and in the autumn and spring courses of instruction, and by the demonstrators and assistants, all so earnest in their work, and with the opportunities of practical teaching, such as we have briefly set forth, the friends of the Jefferson Medical College feel assured that the firm grounding in professional knowledge at which it has always aimed will now be better secured by its pupils than has heretofore been possible ; and they believe that while thus contributing in the most effectual because really most practical way towards enlarging the benefits and elevating the standard of medical education, it will not only maintain the reputation and prosperity already acquired, but accomplish in the future even more than it has achieved in the past.”

A pleasant surprise was in store for the lecturer, for, at the close of the address, one of the under-graduates stepped forward, and, in the name of the class, in a very neat address, presented Professor Rogers with a handsome silver vase as a greeting and welcome from the students, and as a token of their appreciation of him as a teacher.

The address of Professor Pepper upon Higher Medical Education contains many considerations worthy of thoughtful attention, and is, it is needless to add, an able and thorough essay. As the address has not yet been published, we are indebted to the author for the advance sheets, from which we would willingly make extracts did space permit. The following statements, however, are so extraordinary that we cannot forbear reproducing them, as they are certainly important if true : —

“ For many years the course of medical education in this country has been smooth and uniform. Few new features have been introduced ; still fewer important changes or improvements have even been suggested.” “ Each annual course is, as a rule, the mere repetition of the preceding one.” “ This plan compels the teacher to repeat year after year the same course of lectures, in order that the successive crops of students may begin at the beginning.” “ The only direct receipts of the school are the fees of the students ; and thus the faculty is urged by every argument of self-interest and vanity to spare no effort or expedient by which the size of the classes may be augmented.” “ Hence it becomes necessary under the working of inexorable laws of trade for each college to keep down the cost of its diploma, the length of time required to obtain it, the standard of requirements, and the severity of the examinations, in order that it may compete successfully with its neighbors.” “ The schools have joined in the ruinous policy of reducing their fees, shortening their term of studies, and lowering their standard of requirements in order

to avoid being underbid by their rivals." "The unprincipled competition between the schools to secure the largest classes of students and the easy rates at which diplomas are obtainable have stimulated extraordinary numbers to study medicine." "Thus it has resulted that our medical schools are to all intents private business corporations, frequently trading under the sanction of a board of trustees and the dignified title of university, but in reality conducted in the interests not of the medical profession, not of the community, certainly not of medical science, but of the members of the faculty alone." The professor paints a gloomy picture, of which the fidelity to nature, however, is rather questionable. As he has mentioned no exceptions and has not acknowledged any, the condemnation is too universal, the charges are too sweeping, to be strictly just. They come home to the alma mater as well as to the other schools of high standing that still follow the path she esteemed honorable, and which she truly honored by her influence and example for more than a hundred years. What is the nature of the change at the University may be inferred from other portions of Professor Pepper's address:—

"It was announced to the world in May, 1877, that the system of medical education which had been conducted here for more than a century had been replaced by a higher and better system." "It is evident, therefore, that from this time forward those medical students who wish to secure a diploma at the lowest price, in the shortest time, and, I need not add, of the lowest value, will find no place in the class of the University. But, on the other hand, all those students who are willing to give three years to the study of the profession and are anxious to obtain a thorough education will find that the course of this University presents the greatest advantages for the least cost." "I trust that I have made it clear that not only the highest motives but also the claims of self-interest urge all students to pursue such a course of instruction in medicine as is established at this university." "By the liberality of the board of trustees the recommendation of the medical faculty has been approved, which provides a certain number of free scholarships, open by competitive examination to all deserving applicants. It is the expectation that as the endowment of the medical department increases the number of free scholarships will be correspondingly increased, so that the advantages of the University course shall be accessible even to the poorest, if only possessed of merit and ambition."

The new plan adopted by the University is said to be similar to that inaugurated in 1871 by Harvard, the chief points of difference being that Harvard requires a graded course of three years' study of nine months each, with recitations and periodical examinations; the modified plan, as we understand it, substitutes five months for the nine, discards recitations, and does not make attendance upon the lectures an essential for examinations.¹ It has even been asserted that the lectures on surgery and practice of medicine in the third year are the same as those of the second course, in which case the improvement may be thought to be more apparent than real. An alumnus² of the University thus sums up the difference from another point of view:—

¹ Editorial, Philadelphia Medical Times, vol. vii., p. 402.

² Letter to Philadelphia Evening Star.

OLD COURSE AT THE UNIVERSITY.

Number of lectures per week 28 (not including clinical lectures); in five months, 560, or 80 on each of the seven branches.

In two sessions 160, or in three years (optional, without extra cost) 240 lectures on each of the seven branches. Total, 1680. Expenses, \$315.

NEW CURRICULUM.

Number of lectures on anatomy, in three years	160
" " " " physiology, in three years	120
" " " " surgery " " "	160
" " " " practice " " "	160
" " " " obstetrics " " "	120
" " " " chemistry " " "	60
" " " " materia medica, in three years	20

Expenses, \$455.

Total 800

Difference, eight hundred and eighty lectures on the fundamental branches in favor of the old method. By the new plan a graduate who has heard twenty lectures on materia medica is considered as better qualified to practice medicine than one who attends another college where he hears two hundred and forty lectures upon this important subject in the same space of time.

Nearly seven years ago Professor Gross, in an address¹ delivered before the Alumni Association of Jefferson College, made use of the following remarkable and suggestive language:—

"My ideal of a great medical school is far in advance of anything we have at present in this country, or anything we are likely to have for some time to come. Every institution of this kind should be connected with its own hospital and be, if possible, under the same roof. Daily clinical instruction should play a prominent part in its curriculum. The number of didactic lectures should be materially diminished, and more time devoted to practical teaching under the supervision of competent assistants." "Such a school as is here contemplated should have a chair of Pathological Anatomy, a chair of Medical Jurisprudence, and a chair of Medical History and Medical Ethics. In addition to these fundamental branches special instruction should be delivered upon Insanity and Medical Psychology. All these studies should be made obligatory as a part of the curriculum of college instruction." "The term of study should be increased to four years, embracing four courses of lectures of nine months each." "The examinations for the degree of doctor of medicine should be conducted by a separate board, one entirely independent of the school in which the student has attended lectures."

"A higher standard of preliminary education should be demanded, and no applicant should be admitted unless he is a man of high culture and refinement, or, in other words, a thorough gentleman, ambitious to uphold the honor and dignity of the profession." "If the Philadelphia, New York, and Boston schools should unite upon a plan of this kind, I see no reason why it could not be carried out. There might be a temporary decline in the number of pupils, but the public would soon see the difference in the graduate; and the ultimate result could not fail to be in favor of the institutions that would have

¹ An Address delivered before the Alumni Association of the Jefferson Medical College of Philadelphia at its First Anniversary, March 11, 1871, by S. W. Gross, M. D., LL. D., Professor of Surgery in the College and President of the Association.

the courage to take the initiative in a reform in every respect so desirable and proper."

It would really appear as if the most important step for our medical schools to take is the establishment of a preliminary examination, which, indeed, we believe is contemplated at Harvard, and from Professor Pepper's address we learn that it is ultimately intended at the University of Pennsylvania. When this is instituted by a few of the leading schools the remainder will be glad to adopt it, either voluntarily or by the force of public opinion. Every true advocate of medical progress will herald this as a substantial advance towards higher medical education in the United States, and anything less than this will be a gain less real than nominal. Moreover, no matter how many examinations are introduced into the course, until the preliminary examinations are established the colleges are certainly obnoxious to the charge of taking fees from men whom they know cannot meet this test, and who are liable to be dropped at one of the subsequent examinations after they have paid their money, which savors of injustice if not of dishonesty. We hope soon to hear that Harvard has taken the initiative in this matter,¹ as she has done so nobly before in the matter of graded instruction, which has undoubtedly given a new impulse to the cause of medical education in this country.

We are taking much interest in Philadelphia in the next revision of the United States Pharmacopœia, and committees of our College of Physicians, County Medical Society, and the College of Pharmacy are busy in the work and have had several meetings. In this connection it may be stated that after more than twenty-eight years of usefulness in private life the Philadelphia County Medical Society was finally incorporated October 2, 1877, this partly with a view to right of representation in the National Convention for Revising the Pharmacopœia, which meets at Washington in 1880.

A new series of original American medical lectures has been announced to be issued monthly, edited by Dr. I. Minis Hayes, of this city, and published by Mr. H. C. Lea. The first of the series appeared in the *Medical News and Library* for November 1st, and is on the subject of Convulsions in Typhoid Fever, by Professor DaCosta. We are informed that arrangements have already been completed for 1878 with some of the leading medical writers in the country.

Last Saturday, at the Jefferson Medical College Hospital, Professor Gross, at his clinic, operated for lithotomy by the lateral method upon a boy of twelve years, removing the largest stone that he had ever seen in a boy of this age. It was of the oxalic-acid variety and weighed one ounce and five and three fourths drachms. Immediately afterward his son, Samuel W. Gross, removed an osteoid tumor, springing from the cancellous structure of the ascending ramus of the lower maxilla, in a woman. It had been the seat of neuralgic pain for three years.

We have just learned with regret that the venerable Paul F. Eve has passed away; we had the pleasure of seeing him at the last International Medical Congress one year ago.

PHILADELPHIA, November 9, 1877.

¹ Our correspondent does not appear to be aware that Harvard has already done so. — Eds.

COMPARATIVE MORTALITY-RATES FOR THE WEEK ENDING NOVEMBER 10, 1877.

	Estimated Population, July 1, 1877.	Total Mortality for the Week.	Annual Death-Rate per 1000 for the Week.	Death-Rate for the Year 1876.
New York	1,077,228	459	22.16	27.46
Philadelphia	850,856	241	14.73	22.88
Brooklyn	527,880	177	17.48	24.31
Chicago	420,000	123	15.23	20.41
Boston	363,940	120	17.14	23.39
Providence	103,000	48	24.23	18.34
Worcester	52,977	16	15.71	22.00
Lowell	53,678	16	15.50	22.21
Cambridge	51,572	11	11.08	20.54
Fall River	50,372	24	24.77	22.04
Lawrence	37,626	15	20.73	23.32
Lynn	34,524	13	19.57	21.37
Springfield	32,976	6	9.46	19.69
Salem	26,739	5	9.72	23.57

OBITUARY. — At a meeting of the Berkshire District Medical Society, held November 12th, the following resolutions were unanimously passed: —

Whereas, Our beloved brother, Dr. Henry Pratt, of Lanesborough, has been removed by death,

Resolved, That we deeply mourn the loss of a friend endeared to us by his many manly virtues, and of a physician whose high attainments and ripe wisdom rendered him justly distinguished in his profession and a valued member of this society.

Resolved, That we are deeply impressed with the heroism of our friend's character, which, causing him fearlessly and confidently to combat disease in his professional capacity, did not forsake him when he became himself the sufferer, but enabled him to bear severe and prolonged suffering and to face death itself with an admirable Christian fortitude.

Resolved, That we tender our heartfelt sympathy to his bereaved family, and commend them to the care of Him who is "a Father of the fatherless and a judge of the widows."

Resolved, That a copy of these resolutions be sent to the family of our deceased brother, and also to the Boston Medical and Surgical Journal and the two papers of Pittsfield.

A true copy: Attest,

J. F. A. ADAMS, M. D.,

Secretary Berkshire District Medical Society.

PITTSFIELD, November 13, 1877.

SUFFOLK DISTRICT MEDICAL SOCIETY. — The regular meeting will be held at the rooms, 36 Temple Place, on Saturday evening, November 24th, at seven and a half o'clock. The following papers and cases will be read: —

Dr. N. Folsom will show the model of an improved water-closet bowl.

Dr. D. Hunt, a notice of Dr. Garland's paper on Pneumono-Dynamics.

Dr. M. E. Webb, a case of Disease of the Knee-Joint, with specimen.

Tea, etc., at nine o'clock.

BOOKS AND PAMPHLETS RECEIVED. — Walsh's Physician's Handy Ledger, and Walsh's Physician's Combined Call-Book and Tablet. Published by Ralph Walsh, M. D., 326 C Street, North West, Washington, D. C.

What Anæsthetic shall we use? By Julian J. Chisolm, M. D. (Read before the Baltimore Academy of Medicine.) 1877.

Stricture of the Urethra. When and how shall we perform Internal Urethrotomy? By Claudius H. Mastin, M. D. (From the Richmond and Louisville Medical Journal.)

Physician's Vade Mecum and Visiting List. Arranged and prepared by H. C. Wood, M. D. Philadelphia: J. B. Lippincott & Co. 1877.